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Some Observations

ON THE *10/13*

New Method

Of Receiving the

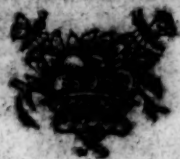
Small-Pox

BY

Ingrafting or Inoculating.

By Mr. Colman.

Containing also
The REASONS, which first induc'd
him to, and have since confirm'd him
in, his favourable Opinion of it.



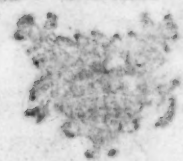
Boston, Printed by B. Green, for
Samuel Gerrish, at his Shop near the Brick
Meeting-house in Corn-Hill. 1721.

Some Observations
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 BY

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Boston, Printed by S. Green for
 Samuel Green, at his Shop near the First
 Meeting-house in Corn-Hill 1721.



TO THE
Reverend & Learned,

Mr. *John Leverett*,
President of *Harvard College* in *Cambridge*,
in *New-England*.

S I R,



Humbly present You with
the following *Observations*
which I have made in my
Visits among the *Sick*, in
in the late Months of Dis-
tress and Mortality, that
have pass'd over us, where-
by I have been determined
(so far as I am) in favour of the *New Method*,
so much spoken against by many, scil. the
receiving the *Small-Pox* by *Ingrasting* or
Inoculating.

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I F You judge the Publishing them may
be a Service to other Towns, and particularly
unto Cambridge, which is so much Your Care,
whither this sore *Distemper* seems to be so fast
spreading it self, I pray You to permit them
to appear under the Protection of your Ho-
noured Name; for honest and harmless as
they are, they may need the best which the
Country can afford.

WHAT GOD has so much owned among
us by his Blessing, and so many of his Ser-
vants, the Fathers of their Country, see reason
daily to adore and praise Him for, should be
reverently regarded by every one, and shall
be by

SIR

Humbly present You with
the following Observation
which I have made in my
Vill among the Sick in
the late Months of Dis-
tress and Mortality, that
have pass'd over us, where-
by I have been enabled to

Your most Humble &
Obedient Servant,



Boston, N. E.
Novemb. 23.

in favour of the Poor, as I am
to much spoken against by many, for the
sake of the Poor, by neglecting or

Benjamin Colman.

Some Observations

On Receiving the

SMALL-POX

By

Ingrasting or Inoculating

WHEN I first had the Account of this common Practice in the *Lavant*, and of the wonderful Success of it there, given by *Gentlemen of Learning* to such a Body as that of the *Royal Society in London*, I could not but give Credit to their *Testimony*, in a Matter of fact whereof they were *Eye-Witnesses*. Immediately the *little Philosophy* I am Master of led me into the *apparent Reasons* of the thing. The more readily & easily these occur'd to me, the more I was affected with the Goodness of *GOD Almighty* therein to a Miserable World. I immediately tho't with myself, and said to some *Superior Persons* in the Town, (who possibly may remember it) What an astonishing Mercy to Us in this Land, this

Dis-

Discovery of a *Gracious Providence* might prove. The more I mus'd upon the thing, and discours'd upon it, the more light I had, or seem'd to my self to have. It appear'd to me as rational as it was surprizing, and gave me great pleasure in the prospect of so great a Benefit to Mankind. For I had not forgot the terrors of the *Small-Pox* when it was here the two last times, Nineteen and near Thirty Years since; tho' it was nothing so Mortal either time as it had been before, (1678.) and has been now again. Besides it being now nineteen Years since the *Small-Pox* had been in the Town, it gave us a very dreadful prospect of Distress and Deaths, whenever it should come among us; all the Children and all the Young People born in the Town, or come into it from the Country, within that long term of time having it before them. Now in proportion to the distress fore seen and expected by us, my Joy naturally rose upon the Discovery of such a Way of Relief as seem'd Opening before us, by the favour of GOD to us. In this simplicity of heart (I speak before GOD who searches it) I gave into a kind Opinion of this *New Method*; My Affection to my *Country* and the saving the *Lives* of my People being the Sole Motive to me, under the *Glory* that should thence redound unto the Name of GOD. I freely spake my Thots in Company and on Occasions as it seem'd proper to me, and when some publickly demanded of us, "Whether People could trust in GOD in using this Means of self-preservation?" I openly answer'd (among my Brethren) in the affirmative, that I judg'd they might. This was after that Dr. *Boylstone* had begun the practice.

practice, which I never put him upon, nor had I
 light to dissuade him from it. According to my
 hope and Expectation it succeeded; altho' the first
 Experiment was the most discouraging; for Mrs.
Boylstone being in the Country and the Doctor
 taken up abroad among his Patients, the Children
 were too much exposed & neglected, and from my
 house (which faces into the Doctors yard) One
 of them was seen three or four days after their
 being Inoculated dabling in the cold water under
 the Pump. This or the like disorders in the first
 Inoculated Child threw him, as well they might,
 into a high and threatening fever. The cause was
 apparent to the Dr. and so did not discourage him,
 nor at all disgrace the practice with us that saw it.
 It was a pleasure however to see that the Small-
 Pox might be communicated, as the *Gentlemen*
 from the *Levant* had informed us. The next Ex-
 periments were made with more care, and accord-
 ingly more answered the Accounts which they
 had given us of a very *light fever* and *few pustles*.
 By this time the *Town* was full of the Sickness,
 and the Deaths that began to multiply led a few
 more into this *Means of safety*; as they hop'd by
 the favour of GOD to find it. The Blessing of
 GOD went along with it; they found *ease* and
sweetness, and lay praising GOD on their Beds,
 or rather sat up in their Chairs doing so. Their
 friends stood smiling about them. Their tongues
 were filled with laughter, and ours with Thanks-
 giving on their account when we went to see 'em.
 We saw them recover fast; the communicated
 Distemper working uniformly upon them, and as
 one would desire. We saw this with wonder and
 Joy

Joy at what GOD had wro't for us. We saw Scores thus recover, even as many as went into the happy practice, and it appear'd to us more and more to be *the Lord's Doing and marvellous in our eyes*. They were as discreet and religious a number of People, and Persons of as good sense and understanding, and of as much caution and fear as their Neighbours, who made these Experiments; and they did it with meekness and humility, patience and silence, and many prayers, under much provocation from too many. Only *one Gentlewoman* has yet died out of an *hundred*, who have now pass'd thro' the Operation. But as you must needs suppose in a Town so full of Infection as this has been, some ten or twelve of this number appear'd to have taken the Infection in the common way; (among whom the Person deceas'd was evidently one) and accordingly they had it of the *Confluent* Kind, or in a fulness of the *distinct* sort, not known among the Inoculated in the *Levant*. This will be so far from seeming strange to you, that indeed it would be next to a *Miracle* had it been otherwise. At the same time it must be allowed, that a good number of those that pass'd so favourably thro' the Inoculation, would probably have had it very favourably in the common way. But that so many should pass so favourably and *easily*, as well as *safely*, thro' the Inoculation; while their Neighbours had so many in every hundred that *suffer'd* so much, as well as *died*, is a sufficient Distinction put by Providence on the Method which we praise GOD for; and commend unto others, as GOD has commended it unto us. W. *written blue and*

For my own part I would not willingly, (at least unnecessarily) say a word that should *grieve*, much less *offend* any one, in this present *Essay*, which I honestly mean to *serve* my Country, and not provoke my Nei'bours. I have no *Interest* to serve by appearing for this Practice ; but the contrary. If I knew any thing in prejudice against it, which might *justly* be said, GOD knows I would offer it. *Boston* can now little be served by it, to what it might have been a few Months past, and I may seem to have been too long silent. But what I have seen of this dreadful Visitation, from one Sick and Dying Chamber to another, (and it may be scarce any one has seen more) awakens me now to write for the sake of *other Towns*, where the Sickness is prevailing, or whither it may come ; that *they* may not put from them *the Mercy* of GOD in this particular, as it seems to me that *we* have done. I can call upon *my Brethren*, the *Ministers* of *Boston*, who the most of them have at times pass'd from the many sad Spectacles of Woe, Corruption, Anguish and Distraction, to the Chambers of the *Inoculated*, to say in what ease and sweetness and serenity *these* have lay. As the passing out of darkness into light, or from a tempestuous Sea into a Calm Haven, or from a place of horror, into a Garden of pleasure, so it has been to us. A thousand Comparisons here offer themselves to mind, which I suppress because they would seem *odious* to some, however just in themselves.

I come now to say, *What I have seen in the Chambers of the Inoculated* ; for I have made it my Business

ness to visit some of them, and to observe the Work of GOD to his praise ; And what I blame in others is, that they have not visited them, and without prejudice or passion, or regard to any private Interest or pique, informed themselves as they might easily have done of this great Thing which GOD has brought to light in our Day ; and if I may serve to set it in any true light before others, I shall account my self honoured of GOD therein.

KNOW then, That the *Incision* which the Dr. makes in the Arm or Leg, are the least you can well imagine, and but Skin deep ; the quantity of the *variolous matter* which I have seen him use to good effect, has been but a single and very small drop upon a bit of Lint. After twenty four hours we threw it entirely away and put on a dressing of Cabbage leaf from day to day : for six and sometimes eight days the Patient continues perfectly well ; then a gentle Fever rises, accompanied with all the Symptoms of the Small-Pox, but in a low degree, an aching head and back, and pains in the bones, &c. This makes him dull and heavy for a Day or two, and presently he finds himself well and the Pock appears, rises, turns, and goes off without any more illness or pain, save what the burning and soreness of the Pock may occasion to him, or some external Fever in the Flesh without any inward one. For the first six days I have found the Issues opened very little ; and seem'd to vent but little ; yet in some bodies more than in others ; but as the Fever comes on and the Pock begins to appear in the Skin, the Incisions of their own accord begin to open and discharge,

charge, and as the Pock fills and ripens the Issues, every Day widen and run more and more, till at the turning of the Pock the sixth or seventh Day, they come to their fullest flowing; and after two Days more they gradually decrease and abate and quickly heal of themselves under the same dressing of Cabbage-leaf, which had before drawn them. So *gentle* and *perfect* is *Nature* in this its own Work, without the Assistance of Medicine ordinarily, and almost any need of Nursing. Neither is there need scarce of a Watcher by night, no more than of a Nurse by Day, the Patient feels and eats so well by Day, and sleeps so well by night. He rarely complains of any pain in his Head, oppression at his Breast, sore Throat, or Thirst; and is seldom offended with his own smell.

But that which is the greatest Benefit by Inoculation, and indeed the apparent Cause of all the ease and sweetness experienc'd under it, is this, That as it *moderates the first Fever* and the Symptoms before the Eruption of the Pock, so it seems totally to prevent *the second Fever* at the turning of it, which is the fatal thing and time unto so many: The evident reason whereof is, because the *Oil* or putrid matter that should be the Fuel within the Body for the flame or fever keeps running out from Day to Day at the Incisions: And besides, the Body not being cover'd with the Pock, and consequently not with scabs (and corruption under the same) when the Pock turns; as it has enjoyed a free perspiration by the Pores, so there is no foul mass upon it to return in, and mix with the juices and blood; by which it is that in

the confluent and fluxy sort, the Body is tainted a second time, as well as the perspiring (so necessary unto Life) is prevented. The Consequence of this again is exceeding happy to the Inoculated, which is, That they have no After-blains and *boils* upon their bodies, which are so frequent and terrible after the suffering of the Small-Pox in the confluent kind: the reason whereof is apparent, Namely, Because the Issues keep open and running at and after the turning of the Pock; and so discharge freely and fully all the Ill ferment or humour, which if it were in part retain'd in the body would cause swellings and boils. So that whereas there is in the other way very often a return *in* of some of the ejected poisons, which taints the blood again; so here is an easy gentle perpetual flow *out*, with a continued perspiration of the body, which prevents after boils, as well as the kindling any present consuming flame within the patient.

It is now some Months, four or five, since many of the Inoculated are come abroad, and they find neither boil nor sore upon them; but are in as good a state of health as ever they enjoy'd in their Life: Nay some have found a much better Complexion and Stomach than ever they had before; and particularly my own *Child* has found so thro' the favour of GOD.

I can tell too of a Woman in the weakness of Child-bed, who eight days after her Delivery came under the Inoculation to avoid the Small-Pox the common-way, GOD sending it then into
the

the house where she was; and tho' she had many more pustles than is usual in this Method, yet she went chearfully thro' the Visitation, and even gain'd strength while the Pock rose to as fine and large a head, of the distinct kind, as I ever saw.

W H E N the Patient in the common way of Infection would have but *few* pustles, he has to be sure fewer, under the Inoculation: When he would else be exceeding *full* it greatly abates and lessens the number of the Pock; and when it would be the *confluent* and fluxy kind we have all the reason in the World to think that it prevents the same, and brings on a *distinct* sort; which sort has but little danger attending it in the common way of Infection, and which only are proper to the Inoculation according to the Account given by the Gentlemen from the *Levant*. Sometimes the Inoculated whom I have seen have had a *large* and angry Pock and a good number of 'em too; sometimes when there have not been many I have observ'd some of those that have appear'd and risen for two or three days to *sink* away and disappear; yet have they created no feverish disorder when they have done so, which looks as if they discharged and vented themselves by the Incisions. Once I found a Young Man under the Inoculation full eno' to have given distress and danger as I apprehended, but his chearful eye and smiles immediately put me out of pain; professing to me that he felt himself so well within, that were it safe or proper he tho't he could goe about his worldly business as well as ever in his Life. In others their fever has been high and
burning

burning in the flesh, when *intowardly* they have found no disorder; neither in head nor breast, but could breathe and sleep even as if in health, or next to it.

I boldly profess concerning as many as I have seen under the Inoculation, even when their Pock came to the height, *scarce the smell of sickness has passed on them*, in comparison of what others undergo in the common way. In some the Issues scarce smell at all, so much as to them that dress 'em. It has seem'd to me nothing more than what a Cabbage-leaf upon a *common Issue* must needs cause at the end of 24 hours. Where the Patient would have *many* Pock in the common way, and consequently have the more under the Inoculation, there the Issues must be supposed to run the more. Where the Patient is fullest under the Inoculation I affirm I could never smell their Issues at their Bed-side; no not when I have lean'd over their Bed on purpose to do it. Yet certainly the Issues do smell more or less as the degree of the Distemper is upon the Patient. And where the Infection is taken the common way, and the *Confluent* kind comes in the Eruption, there the Issues you may well think find much more to vent, and the Discharge is *more noisome*, like the running of the fluxy kind. But at the worst, even in *this case*, the hours excepted wherein *kidneys* have been sometimes applied to neck or feet, it is nothing, that I could ever find or hear, in comparison of that prodigious *fench* which is so common for many days together under the fluxy sort, wherein one can hardly bear the Rooms.

It therefore appears to me one of the boldest *Impositions* on our Senses and Reason, that has been attempted since the Day wherein *Transubstantiation* was obtruded and forced upon the Christian World, to bear us down as some would, "*That the Inoculation has caus'd the dreadful Malignity and Infection* which has been in the Town. To say this to Us who have been call'd from day to day to the many *noxious Chambers*, each of which have had *poison* eno' in 'em to have spread the Town over, and which have been continually by day and night filling the Air with Infection by the Chimneys and doors, till at last the Windows have been thrown open too upon the Souls leaving the corrupted Body, — requires an *Assurance* indeed. Our Nei'bours must forgive us if we condemn it as a most foolish Opinion, and ridiculous Imputation. We must call it so, if not worse; or we must forego our sense, and the common understanding which GOD has given us. On the contrary, I must constantly think that the Inoculation has been an Abatement, and Prevention of the greater Malignity that would have been by more of the confluent and fluxy sort. Besides, In fact, the Malignity and Mortality has not been now so great, in proportion to our present numbers, as it was three and forty Year agoe, when in about fourteen Months we are told *Eight hundred* People died of it; which I suppose was a greater Mortality than if *Eighteen* hundred had died of it now. Some who were then Adult tell me what great numbers were then buried in a Week: Families were then desolated and broken up, and the very flesh rotted off the bones of some. And was at last
find

find too by sad experience, that They understood as well the managing the Distemper then as we do now : For when the Malignity comes to a Height, we find that we know very little or nothing what to do.

N O R does it appear to me at all reasonable to think, that what the Issues of the Inoculated do discharge, is at all Malignant like what is vented by a fluxy Maturated Pock, and after it turns and lies stinking on the body : It is not filthy and putrid, that ever I saw, like the running Pock : It has not the time to come to the venome of that before it is thrown out, and then it is immediately taken away ; and consequently as it arrives to no such Malignity and Infection, so it can communicate none such.

M U C H has been said too, and dark hints given at times, about the *Purple Spots* in the skin, or *blewish stains* which have been upon many and commonly are the sure and fatal signs of their approaching death. But as *these* are spoken of by them that have wrote of the Small-Pox before our days ; so I very much question whether the Bodies which I have seen so stained do yield any Malignant Infection equal to the corrupted and noisome Bodies of others that ly and putrify under the fluxy kind. I am sure to my senses they have not at all seem'd equally noxious. And when I reason upon the *Cause* of these stains in the skin, it seems generally to be the suppression of the Pock under it, which wants to come freely forth, but being obstructed by the *Stagnation* of the Blood it rises no higher than to discolour the skin, which tho' it may well argue more Malignity within

within and may give a more poisonous breath to the Patient while he lives ; yet Methinks the Pores of the Body do by no means breathe out the like Malignity as if the Pock rises & breaks & stinks. How the case may be in *Spotted Fevers* I know not, and whether I am right in what I have here advanced I submit to the *Physicians*, and am ready to stand corrected by their Judgment.

THERE yet remains three or four things which have occurred to me, which I think meet to observe or relate,

ONE is, That I am at present strong in the Opinion, that those Persons who had taken the Infection before they were Inoculated, yet were greatly serv'd in their Sickness by the running of their Issues, which vented much of the Inflammatory matter that would have increas'd their Fevers. Some who have recover'd have tho't so themselves, and so have all about them. And as to the Gentlewoman that died, her Husband has told me that in his opinion the Incisions did much toward the preserving his Wife so long, and so far as she was preserved thro' her sore Visitation.

NEXTLY, I would observe, That in case the Infection be taken the common way, and the Eruption would not have been in some Weeks ; As we certainly know that it will ly in the Body sometimes a Month before it breaks out ; yet the infected Person coming under the Inoculation, it will bring on the Distemper at the usual time of seven or eight days. Not only the reason but the necessity of this seems very plain ; and it accounts for a Difficulty with some, which is, Why the Sicknes comes at the period proper to the Inoculation, and

yet it proves the confluent kind which is not proper to it.

I lately met with a *Treatise* on the Small-Pox wherein the *Author* advances this Rule or Maxim, "That all venemous Particles do first enter the Body thro' the Pores of the skin, and so croud in to the Humours & juices, & thence into the sanguin Parts. From hence he accounts why the face & hands & feet are usually fullest of Pocks, because those parts of the body are more open and exposed for the admission or entrance of those venemous Particles.

I carry'd on the *Hypothesis* in my own mind a little further, by that *Modern Observation* which has been made of a Multitude of *Animalcula* on every Pustle of the Small-Pox: *These* they tell us their Glasses have discover'd; and that our common Infection is by swarms of these. If so, Metho't these living Minute Particles, these Animated Atoms if I might so speak, may much more easily find their way into our Pores & so into our bodies, than if they were Inanimate.

BUT if one Hypothesis or other may be at all admitted, with this further & most reasonable tho't upon them, that these *venemous Particles* or *Animalcules* do also flow into our nostrils, throat and blood by our breath; then may they not give us a Reason why the Small-Pox communicated by Incisions in the way of Inoculation, does not produce so many Pock, and such a *flame & corruption* in the body, as in the common way of Infection it ordinarily does? Because in this way not so many enter, nor immediately into such parts of hazard and distress, as in the nostrils, throat & inwards? —

But

But I pretend not to argue, on *Principles* or *Premises*, which are themselves uncertain; and ly open to many Objections which I could never answer.

I will only add upon all a plain, but to me pleasing & informing *discourse* I lately had with a *poor Negro*, whom I found at work where I made a visit, and the *Gentleman* of the House told me the Fellow had been Inoculated in his own Country. Whereupon I put several questions to him, in answer to which he told me, That he liv'd in a great Town in his own Country, and when the Small-Pox came into it they did what they could to prevent the spreading of it; that the Families that were first visited usually died among them; but when the Sickness got into five or six houses, so that the People began to despair of being able to stop it, then all who had not had it went presently & receiv'd it in the way of Inoculation, (as we call it) and that not one more died of it thro' the whole Town.

We do not stay therefore (said he) till the Town be infected, and People have many of them got the Sickness within them, and then go & take it; but a whole place takes it in a Week & are well in a Week. (I use but some of his words here, giving the true sense of what he said to me.)

He went on in answer to the questions I put to him, and told me, That he never knew of any blains or boils following this practice in his Country; that as to himself none had troubled him, any more than what others are subject to; & that He never heard of any bodies having it again in his Country; but to prove that his Country-men think themselves as secure from it as any of us may do, he told me, That sometimes when Young men among them wanted to go a trading two or three hundred

Miles

Miles off, but were afraid because they had not yet had the Small-Pox, it was common for them to enquire where it was, & go to the place & be Inoculated, & then go & trade any where without fear. When I ask'd him (what I did not at all suppose he could inform me in) How his Country-men came into the knowledge of this way of giving the Small-Pox? & how long it had been among them? he told me he knew nothing of those things; he suppos'd it was long before he was born; and no doubt" but GOD told it to poor Negroes to save their lives; for they had not knowledge & skill as we have.

I believe I shall be scoff'd at for telling this *Simple* story, but I think it very pertinent & much to the purpose here; and whosoever seeks the Truth & desires to be informed will not despise it. And he that has learnt any thing as he ought, has this — to be willing to learn of the poor at home as well as in the Town.

Upon the whole, I do not think that I at all go out of my way in the present Essay. The plain intent of it is to serve unto the preserving of Life, and to minister unto the comfort of Families. This is a Care befitting me, or any one else, if it be manag'd with modesty & decency. My care to do it so, is I think visible eno' in the present writing. I have avoided any appearance of seeming learned in *Physick*. I am not: Nor shall I matter it at all, if I have betray'd my Ignorance therein. I write with another design, & if that, be answer'd I have all my desire; or if it be rejected with scorn and revil'd I shall be satisfyed in this, That I have again endeavour'd the Good of this People.

F I N I S.

ERRATA Page 3. line 11. for Pump read Gutter.

Druggs. 12. 1721. Ye Number of ye Inoculated are
with no war 250. & four are dead.

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